

Land ArmamentsTrends

The Chinese acquired most of their industrial base for producing land armaments through Soviet assistance programs which began in the mid-1950's and terminated with the withdrawal of Soviet technicians about mid-1960. During the earlier part of the 1950's program objectives evidently were aimed at equipping the Chinese ground forces with a range of Soviet-produced conventional weapons. Chinese production of Soviet-designed weapons and artillery was underway by 1959, and quantity production of a copy of the Soviet T-54 medium tank had begun.

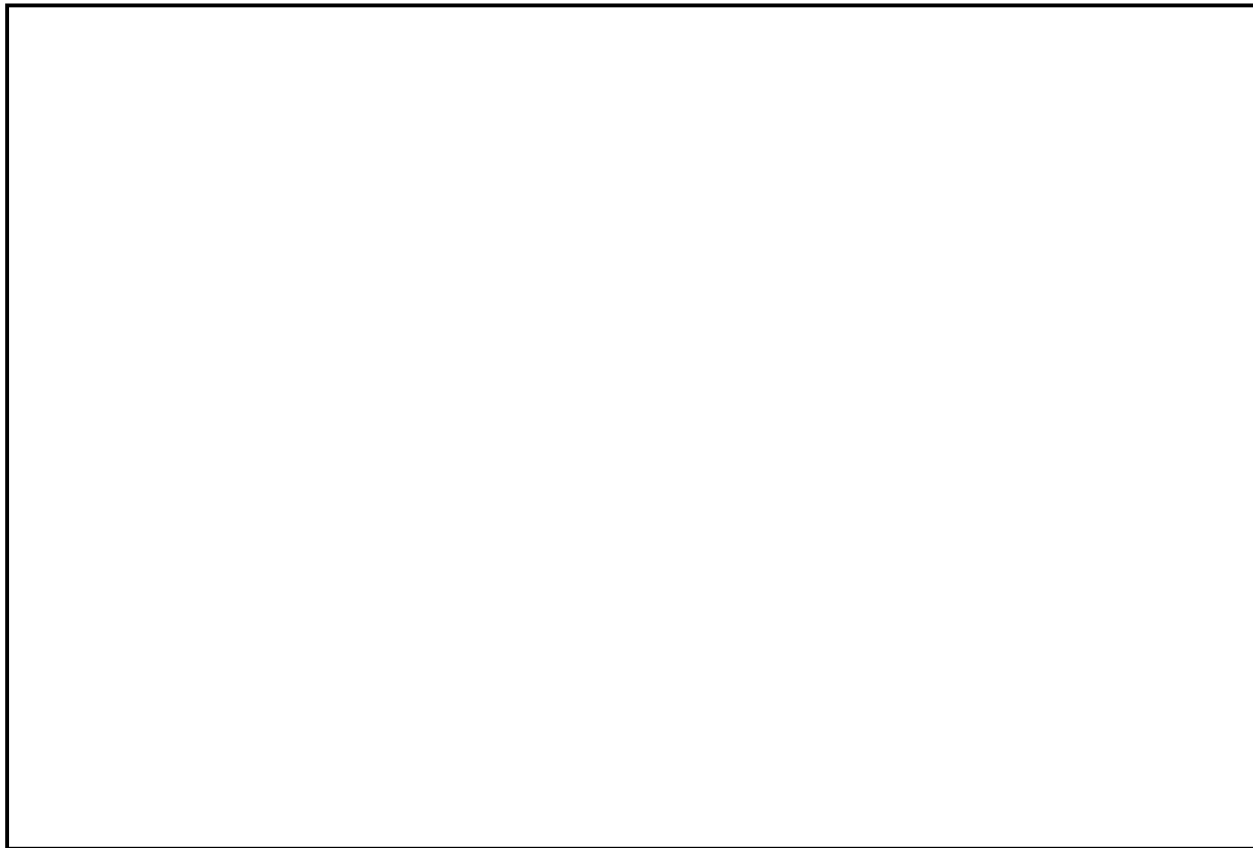
The withdrawal of Soviet assistance halted production at almost all the land armaments plants during 1961 and most of 1962. During 1963, production of many items reached, and in a few cases exceeded, the 1960 levels. From 1964 through 1966, production levels were either generally maintained or climbed at varying rates. Production levels for 1967 are assumed to have been lower than those of 1966 because it is believed that the Cultural Revolution affected the land armaments industry about as adversely as it did other segments of military industry. There is no direct evidence of this, however, and the reduction estimated for 1967 is arbitrary.

In retrospect, the dismissal of Minister of Defense P'eng Te-huai in the fall of 1970 ~~seems to~~ to have presaged a reimposition of Maoist

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military doctrine which considers political motivation as the pre-eminent factor in land warfare. The implementation of this concept requires a large investment in the most basic equipment for outfitting vast numbers of militia troops, although theory and practical considerations combine in requiring that advanced weapons be available. Since the recovery of production in 1963, the effect of these disparate requirements on land armaments production is shown in the slow rate at which tanks and heavy artillery have been produced versus continuing production of infantry weapons beyond the requirements of the regular ground forces.



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Artillery

	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
85 mm div. guns	--	--	50	100	25	50	100	150	150	200	150
122 mm hwtzs.	50	100	100	100	25	50	100	100	150	150	100
152 mm gun hwtzs.	25	50	50	50	--	--	25	50	50	50	25
102/107 mm rkt. lnchrs., towed	--	--	--	--	--	--	25	50	50	100	100

Mortars

60 mm	--	--	--	--	--	--	500	2,000	2,000	2,500	2,500
82 mm	1,500	1,500	1,500	1,000	--	250	5,000	4,000	3,500	2,000	2,000
120 mm	2,000	2,000	1,000	1,000	--	200	1,000	2,000	2,500	2,500	2,500
160 mm	--	--	--	--	--	--	50	100	200	300	300

Antiaircraft Guns

14.5 mm AAMG	1,500	2,000	1,500	1,000	--	250	400	500	1,200	1,500	1,000
37 mm AAW	1,500	1,500	1,000	--	--	--	--	--	--	--	--
57 mm AAA	--	100	500	300	--	--	300	600	900	1,200	1,000
85 mm AAA	--	25	50	50	--	--	25	25	50	50	25

Armored Vehicles

Tanks, T-59/100 mm (Chicom copy of Soviet T-54)	--	10	150	250	--	25	50	150	250	400	350
Tanks, T-62/85 mm (light tank based on T-59)	--	--	--	--	--	25	50	--	--	--	--
Tanks U/I amphibious (Chicom copy of Soviet PT-76)	--	--	--	--	--	--	--	--	5	10	10
U/I armored personnel carriers	--	--	--	--	--	--	10	10	--	--	--

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	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>
<u>Small Arms (in 1,000's)</u>											
(Antitank weapons)											
75 mm recoilless rifles	2.0	.75	.75	.25	--	.75	1.2	2.0	2.0	2.5	2.5
40 mm RPG-2 antitank rkt. inch.	4.5	10.0	--	--	--	2.5	9.0	5.0	4.0	3.5	3.5
(Machine guns)											
12.7 mm heavy MG	1.0	1.0	1.0	--	--	--	0.3	2.0	4.5	3.5	3.0
7.62 mm heavy MG (two models)	--	--	--	--	--	--	--	1.3	4.0	5.5	5.5
7.62 mm light MG (two models)	14.0	21.0	30.0	27.0	--	16.0	40.0	58.0	40.0	11.0	11.0
(Individual weapons)											
7.62 mm pistol	150.0	115.0	90.0	50.0	--	--	60.0	90.0	150.0	60.0	40.0
7.62 mm carbine (Chicom copy of Soviet SKS)	425.0	400.0	200.0	80.0	--	185.0	210.0	270.0	160.0	110.0	85.0
7.62 mm assault rifle (Chicom copy of Sov. AK-47)	55.0	120.0	90.0	80.0	--	70.0	65.0	85.0	160.0	170.0	150.0

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Naval ForcesTrends

Most of Communist China's shipbuilding industry was built with Soviet assistance between 1955 and 1960. From about 1955 to 1959, ship construction consisted of assembling Soviet vessels under Soviet direction, but in 1959 the Chinese apparently assumed this responsibility.

The impact of the 1960 Sino-Soviet rift severely constrained construction in general, but the shipbuilding industry was sufficiently well established in part so that construction of submarines and some other craft never ceased entirely. By 1963, most of the present construction programs had resumed or begun and were proceeding at a slow pace. Expansion and improvement of shipyards and component industries also ~~was~~ resumed. Output increased gradually and the number of naval units constructed during 1965 and 1966 exceeded the peak yearly number assembled with Soviet assistance. The major shipyards were operated well below their maximum capacity, however, and almost entirely in support of naval programs. The rate of construction began to decline in mid-1967, evidently reflecting the impact of disturbances created by the Cultural Revolution.

Submarines

Assembly of W-class submarines began in 1957 at the Kiangnan and Wu-ch'ang Shipyards. Twenty-one units were assembled with

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Soviet assistance. Several completely assembled units in various stages of outfitting in mid-1960, however, were not ready for service until late 1962. In that year R-class submarine construction was begun at these shipyards and construction of the G-class ballistic missile submarine began at the Lu-ta Shipyard. Although construction of the R-class proceeded quite rapidly for a time, progress slowed before the first submarine was completed in 1964, and since then the pace of construction has remained slow. The G-class submarine was completed in 1965, but construction of another has never begun.

Destroyer Escorts

Assembly of Riga-class destroyer escorts (DE's) began at the Hu-tung Shipyard during 1956. Three were assembled in 1957. No other vessels of this type were built until 1965 when construction of the Kiangnan-class, a redesign of the Riga-class, was begun at the Kiangnan and Tung-lang Shipyards. None have been placed under construction since early 1967, and it is probable that the program is being terminated.

Subchasers

Eight Soviet subchasers were assembled in 1957 (6 in 1956). No other vessels of this type were placed under construction until 1964 when work on a Chinese designed craft began at the Huang-pu Shipyard. Construction of this craft also began at the Chiu-hsin Shipyard in 1967.

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Patrol Craft

Relatively large numbers of patrol craft, especially motor torpedo boats, were built between 1957 and 1961. Construction, however, began to decline in 1960 and no new units were observed in 1962. Building programs resumed in 1963 and the first missile patrol boat was identified that year. Construction rates of all types increased generally through 1966. The overall rate was maintained during 1967 because construction of torpedo boats nearly doubled, and many 1967 deliveries represented part of the 1966 production effort.

Minesweepers

Except for the year 1961, the Chinese have turned out minesweepers continuously since 1957. Although construction of the original type (Soviet T-1) also was interrupted during 1963 and 1964, construction of smaller types more than filled the gap during those years. Overall output increased gradually through 1966, dropping significantly in 1967.

Amphibious Craft

Large numbers of amphibious craft have been built since 1955. Most of these units have been copies of a small US landing craft, but in the past several years a larger craft (Yunnan-class) has been built in Shanghai. Slowdowns in this program occurred after the Soviet withdrawal and again in late 1967.

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Naval Auxiliaries and Other Craft

Steady construction of auxiliary craft did not begin until 1963 and rates have been quite low. As in almost all the other programs, rates fell in 1967. Construction of river patrol craft has been continuous since 1957, but the trend of construction has followed the general pattern for the industry.

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	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>
<u>Submarines</u>											
W-class	4	6	5	1	2	3	--	--	--	--	--
R-class/torpedo attack	--	--	--	--	--	--	--	1	1	2	2
<u>Destroyer Escorts</u>											
Riga-class	3	--	--	--	--	--	--	--	--	--	--
Kiangnan-class	--	--	--	--	--	--	--	--	--	2	2
<u>Subchasers</u>											
Kronshtadt-class	8	--	--	--	--	--	--	--	--	--	--
Hainan-class	--	--	--	--	--	--	--	1	1	--	1
<u>Patrol Craft</u>											
OSA Y-10 (Guided missile boat)	--	--	--	--	--	--	--	1	1	2	2
Komarov Y-10 (Guided missile boat)	--	--	--	--	--	--	1	--	--	2	--
Shanghaï PTF (Fast patrol boat)	--	--	4	4	4	--	3	15	30	50	30
PGM Motor gunboat	5	15	20q	15	5	--	5	10	15	25	25
Torpedo Craft	25	25	25	15	5	--	--	2	5	15	35
<u>Mine Warfare</u>											
T-43	2	2	3	1	0	2	--	--	2	4	--
MEM/MSA	--	--	--	--	--	--	2	15	15	15	10

* Years are those in which the units reached operational status.

	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>
<u>Amphibious Craft</u>											
LCM/LCT	15	30	30	25	25	--	5	10	25	25	25
<u>Auxiliaries</u>											
Sub Tender A	--	--	--	--	--	--	--	1	--	--	--
AG/AOL (Oil)	--	--	--	--	--	--	1	2	5	7	5
AK/AKL (Cargo)	--	--	--	--	1	--	--	3	2	2	2
AG-Misc.	--	--	--	--	--	--	--	--	--	2	--
<u>Other</u>											
YP-river patrol	15	15	15	15	10	5	10	10	15	20	15

AircraftTrends

With Soviet assistance, the Chinese began to build an aircraft industry in the mid-1950's. In 1957, production of MIG-17 jet fighters began at Shen-yang Airframe Plant 112, and the first piston transport AN-2 was produced at Nan-ch'ang Airframe Plant 320. Production of MI-4 helicopters began at Harbin Airframe Plant 122 in 1958. In 1960, production of MIG-17's at the Shen-yang plant began to be replaced by assembly of the MIG-19. The withdrawal of Soviet aid in mid-1960 halted the production of fighters and helicopters. AN-2 transports continued to be produced, but at a greatly reduced rate.

Production of a piston trainer (a Chinese version of the Yak-18 primary trainer) was initiated at the Nan-ch'ang plant in 1964. The MIG-17 jet interceptor and MI-4 helicopter programs were resumed in 1965. Production of all types of aircraft expanded steadily until 1967 when output declined at all the plants, apparently a result of disturbances related to the Cultural Revolution.



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Aircraft

Type of Aircraft	Model	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Jet fighter	Fresco (MIG-17)	1	120	1	90	--	--	--	--	--	--	--
	Farmer (MIG-19)	--	--	1	25	--	--	--	--	170	290	180
Piston transport	Colt (AN-2)	1	58	110	110	33	15	52	40	60	97	60
Piston trainer	Ch'uchiao-6	--	--	1	--	--	--	--	6	20	24	12
Helicopter	Hound (MI-4)	--	1	3	21	--	--	--	--	40	120	80

Surface-to-Air MissilesTrends

A Soviet assistance program designed to create the scientific and technical base to support Chinese missile development and production programs probably began early in 1958. Construction of missile research and development facilities did not begin, however, before mid-1959, and they were in a very early stage of construction when Soviet assistance programs were terminated in mid-1960.

Ten-to-twelve sets of SA-2 unit equipment were supplied to China in the late 1950's as part of direct Soviet assistance to China's military forces, but the Chinese were not able to exploit immediately the technology embodied in the SA-2 system.

Construction and tooling of research and development and production facilities did proceed steadily, however. The T'ai-yuan double-base propellant plant could have begun manufacturing SAM booster motors in 1965. A Chinese open source publication connected the Tientsin Electronic Equipment Plant with SAM system computer production late in that year.

Chinese production of complete SAM sets definitely ~~was~~ in 1966 when five or six sets of unit equipment were produced.

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Seven or eight sets of SAM equipment were produced in 1967 -- a significantly smaller number than expected. The shortage probably was at least in part a by-product of the Cultural Revolution which caused severe civil disturbances in all the industrial centers associated with production of this weapon system.

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SA-2 Sets

Chicom sets generally include:

- 6 missile launchers
- 6 launcher bogie wheels
- 12 missile transporters
- with 12 "ZIL type" 157 trucks
- 4 canister transporters
- with 4 ZIL type "157" trucks
- 12 SA-2 Model 1 missiles
- 4 missile sustainer canisters
- 4 missile booster boxes
- 1 Fan Song "B" radar w/ECCM
- 6 guidance/control truck vans
- 5 guidance/control trailer vans
- 1 target acquisition radar
- 1 communications van
- 10 AT-S tracked artillery tractors
- 1 oxidizer transport trailer
- 1 water or fuel truck
- 2 canister dollies
- 1 fork lift
- 4 cargo trucks
- 1 K-51 crane

* Imported Soviet SA-2 sets with standard "B" model Fan Song and Model 1 missile.

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